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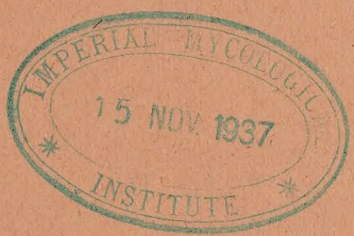

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INTERNATIONAL BULLETIN OF PLANT PROTECTION

1937 No. 11

DISCOVERIES AND CURRENT EVENTS *

Argentine Republic: The Green Bug, *Toxoptera graminum.* †

Mr. Gustavo J. Fischer, agricultural engineer of the 'Instituto Fitotécnico y Semillero Nacional' of 'La Estanzuela', Uruguay, on 22 May, 1937, remitted to the 'Dirección de Sanidad Vegetal' of the Argentine Republic, a number of aphids which had made their appearance in some oat fields near the afore-mentioned Institute, and which caused the plants to wither in patches, the damage effected being estimated a 1 to 2 per cent. of the area under cultivation.

Mr. Everard E. Blanchard, entomologist of the Division of Agricultural Zoology identified the so called 'pulgón verde' as being *Toxoptera graminum,* Rond., of common and widespread occurrence in Europe and North America, which information was communicated to Mr. Fischer.

On 3 June, 1937, Mr. Juan R. Báez of the 'Servicio de Reconocimiento y Control Sanitario' sent from Paraná, Entre Rios, specimens of the same insect found on oats and wheat cultivated in the proximity of Buenos Aires; consequently the 'Dirección de Sanidad Vegetal' took immediate steps to control this pest, at the same time commissioning Mr. Ramón Bazán, entomologist, to investigate the spread of the insect and the type of damage caused to crops. Up to date, it has only been reported on the banks of the Paraná river from La Paz to Diamante, being recognized and controlled by the farmers.

On 18 June, 1937, Mr. Fischer informed the Director of 'Sanidad Vegetal' of the efficacy of soap solutions in the control of the green bug, advocating the formulae obtained by the 'Fábrica Oficial del Tigre' for the preparation of insecticidal soaps, the effectiveness of which has been extensively tested by the aforesaid 'Dirección' in the control of various aphides of plants since

* Under this and the next heading the countries are arranged in French alphabetical order.

† Communication from the official correspondent of the Institute, Mr. JUAN B. MARCHIONATTO, Agricultural Engineer, Director of 'Sanidad Vegetal', Ministry of Agriculture, Buenos Aires, Argentine Republic.

1935. Formulae for two soaps were given, one a soft soap with a basis of whale oil and caustic potash and the other a hard soap prepared with tallow, resin and caustic soda, which are adopted in the proportion of 1 ½ and 2 per cent. solutions.

The widespread appearance of the green bug is attributed to many factors and particularly to exceptional climatological conditions, which were characterized by mild temperatures and persistent drought. It is possible that in Uruguay, this phenomenon became accentuated, thus favouring the propagation of the pest.

The damage caused by the green bug is generally occasional and although this pest attacks different cereals and grasses, preference is given to oats. Its action may be checked by natural enemies some of which (*Aphidius pratensis*) have been recently tested on specimens sent from Montevideo by Mr. Agustín Trujillo Peluffo, agricultural engineer of the ' Dirección de Agronomía '.

It may be definitely affirmed that in consequence of the rains and the winter season now beginning, no further damage will occur. This fact is corroborated by information received from Uruguay.

Australia: Notes on Plant Diseases Recorded in New South Wales for the Year Ending 30th June, 1937 *

Cereals and Field Crops.

Seasonal conditions were not favourable for development of disease in wheat crops. Frost damage, however, was more severe than usual. Purple patch (*Rhizoctonia solani*) was of importance in wheat and oats in some districts. Ergot (*Claviceps paspali*) of paspalum developed extensively in coastal pastures. *Gibberella moniliformis* and *G. fujikuroi* var. *subglutinans* were of major importance as stalk and root rots in maize crops. *Helminthosporium* sp. was associated with a severe root and basal stalk rot of maize in one area. *Colletotrichum* sp. was important as a cause of root and stalk rot of broom millet. Bacterial streak (*Bacterium holcicola*) also resulted in injury, whereas bacterial stripe (*Bact. andropogoni*) was of minor importance in millet crops.

Lucerne crops were again affected with disease, the most important conditions being stem nematode (*Anguillulina dipsaci*) and witches' broom (virus); a further condition, apparently identical with the dwarf disease (virus) was recorded for the first time. A witches' broom condition (undet.) was observed in crops of soybeans.

Early blight (*Alternaria solani*) was of serious importance in some potato crops. Black scurf (*Rhizoctonia solani*) developed extensively; the *Corticium* stage was readily apparent in many crops in cooler districts. Powdery mildew (*Oidium* sp.) was observed in a crop of the potato variety Early Manistee. Leaf

* Communication from the official correspondent of the Institute, Dr. R. J. Noble, Biologist, Biological Branch, Department of Agriculture, Sydney, New South Wales, Australia.

roll (virus) was again of importance. Other potato virus diseases included mosaic, witches' broom, tomato spotted wilt and ' paper leaf ', a condition apparently of the spindle tuber type.

Fruit Crops.

Citrus fruit were severely affected with black spot (*Phoma citricarpa*); Septoria spot (*S. depressa*) was recorded in navel oranges from inland irrigation areas. Black spot of apples (*Venturia inaequalis*) was less serious than usual. Internal cork (boron deficiency) caused extensive losses. Experimental areas responded to borax treatments. Dry seasonal conditions were associated with slight development of disease in summer fruits. Brown rot (*Sclerotinia fructicola*) caused some loss in canning varieties of peaches. Freckle (*Cladosporium carpophilum*) was less serious than usual.

Bunchy top (virus) of bananas was of more importance than in recent years. Leaf spot (*Cercospora musae*) was destructive in banana plantations during the autumn. Cigar end (*Stachylidium theobromae*) was of importance in varieties which did not shed bracts readily. Squirter (*Nigrospora sphaerica*) of bananas caused loss in fruits consigned to cooler areas.

Eritrea: Locusts *

No locusts were reported in the Colony during the month of August, 1937.

Southern Rhodesia: Locust Invasion, 1932-1937 †

Monthly Report No. 57. August, 1937.

A few winged swarms of the Red Locust (*Nomadacris septemfasciata*, Serv.) have been reported from the north of the Colony during the month of August, 1937, the districts included being Salisbury, Sebungwe, Lomagundi and Umtali. The swarms have all been described as ' large '.

No damage to crops has been reported.

Italian Somaliland: Locusts §

During the month of July, 1937, no locusts were observed in the Colony.

* Communication from Dr. Luigi M. Bologna, Acting Chief of the Bureau of Agriculture of Eritrea, Asmara, transmitted to the Institute by the Government of the Colony.

† Communication from the official correspondent of the Institute, Mr. Rupert W. Jack, F. E. S., Chief Entomologist, Department of Agriculture, Salisbury, Southern Rhodesia.

§ Communication from Dr. Ferrante Paveri-Fontana, Acting Chief of the Agricultural Bureau of Italian Somaliland, Mogadiscio, transmitted to the Institute by the Government of the Colony.

LEGISLATIVE AND ADMINISTRATIVE MEASURES

Chile. — By Decree No. 95 of 21 January, 1937, aeroplanes of the Pan American Airways, Inc., travelling from Arica to Santiago, are permitted to take supplies of fruit obtained in Arica for passenger' consumption, always on the condition that the said fruits were inspected by the ' Inspección del Servicio de Sanidad Vegetal ' in Arica, which shall grant a certificate authorizing departure.

The quantity of fruit which may be transported by the planes shall be only that strictly necessary for passenger consumption. In the case of excess fruit, the surplus shall be confiscated on arrival of the planes at Santiago by an inspector of the ' Servicio de Sanidad Vegetal '. (*Boletín del Ministerio de Agricultura*, Santiago de Chile, enero-febrero-marzo, 1937, año IV, nº 11, págs. 203 y 204).

*** By Decree No. 96 of the same date, the South American Fruit Company is authorized to ship bananas through the port of Caldera, on the condition that the said fruit is accompanied by a corresponding certificate issued by the ' Sanidad Vegetal ' of the country of origin, testifying that the fruit originated in a zone free from fruit fly [*Anastrepha* sp.] and that the said Company guarantees all expenses incurred in the inspection of the fruit at the port of Caldera by an official of the ' Servicio de Sanidad Vegetal ' de Copiapó. (*Ibid.*, pág. 204).

Colombia. — According to a Circular (undated) of the Ministry of Agriculture and Commerce, Department of Agriculture, Section of ' Sanidad Vegetal ', any person desirous of introducing into Colombia material for plant propagation (seeds, slips, cuttings, branches, fruits, roots, shoots, tubers, bulbs, rhizomes, stocks, etc.) is required to make a preliminary request to the aforesaid Ministry on stamped paper on each occasion in order to obtain the necessary permit for import.

The material for plant propagation should be accompanied by a certificate of plant health issued by a Government phytopathologist and entomologist of the country of origin, or by official organizations or bodies, testifying to the sanitary condition of the product, and that it is exempt from diseases and pests. These certificates shall be vised by the respective consular officer in Colombia, or by an officer of a consulate of a friendly nation, if the country of origin has no agent in Colombia, except in the case when the dispatch firm has obtained permission from the Ministry of Agriculture and Commerce.

The importer is obliged to present at the custom-house, or in the post-office, or at the respective air-port, besides the certificate of plant health, the preliminary permit granted by the Ministry in order to verify the import. At these establishments, the imported product will be subjected to a strict inspection by the ' Sanidad Vegetal '. (*Boletín Agrícola*, Medellín, Colombia, 1937, nº. 227, pág. 930).

Ecuador. — By Decree No. 120 of 1 July, 1937, full approval is given to the phytosanitary 'Acuerdo' signed at Guayaquil on 9 January, 1937, by the official delegations of Ecuador and Chile, 'Acuerdo' which supplemmented Art. IX of the Commercial Agreement between the two countries, in force since 7 April, 1936. (*Registro Oficial*, Quito, 6 de julio de 1937, año II, núm. 532, pág. 1310).

*** The text of the above-mentioned Ecuador-Chilian phytosanitary 'Acuerdo', previously approved by the Government of Chile, is as follows:—

(1) The import of oranges from Ecuador to Chile shall remain subject to the following regulations:—

(*a*) The oranges of the variety called national and nominated 'añera' which ripen during the months of September to December inclusive shall be accepted in any part of Chile. During the remainder of the year, the oranges grown as far as Taltal may be imported.

(*b*) In the orchards where these fruits are produced all fruits fallen on the ground should be removed twice a week, whether they are oranges or fruits of any other species planted with the orange trees up to a distance of 500 metres from the orange grove. The mango (*Mangifera indica*), guava (*Psidium guajava*), custard apple (*Anona squamosa*) and other fruit trees attacked by the fruit fly (*Anastrepha* sp.), should be sprayed twice a month, during the months from August to December inclusive in order to destroy the adult flies. The ground at the foot of the aforesaid trees should also be kept cleared.

(*c*) The general requirements of sanitary certification necessary for any plant product, must be complied with, and 'standard' packing must be adopted.

(*d*) On arrival at Chile, consignments shall be inspected by the 'Servicio de Sanidad Vegetal', which shall confiscate any consignment containing larvae of the fruit fly, or any other species.

(*e*) The health certificate of the Ecuador authorities shall comply with the preceding conditions.

(2) Avocados (*Persea gratissima*) may be imported from Ecuador into any part of the Chilian territory on the condition that:—

(*a*) At the time of shipment, the fruits was in a proper ripe state.

(*b*) In the region where produced, avocado anthracnosa (*Physalospora perseae*) does not exist, or in a region where the cankers produced by this fungus on the trees have been practically eliminated and where a systematic control is being continued. The fruits should be free from the lesions caused by the said fungus and not contain caterpillars.

(*c*) The certificate issued by the health authorities of Ecuador, shall comply with the preceding conditions.

(3) The Ecuador delegation accepts the condition that for import into Chile, alfalfa seed shall not contain a quantity of dodder [*Cuscuta*] exceeding ten grains or seeds of this parasite per kg. of alfalfa seed, which statement must appear on the respective sanitary certificate.

(4) Both delegations are in agreement that agricultural progress cannot be advanced unless the countries have at their disposal well organized Plant Protection Services, furnished with specialized experts and the requisite material to execute the respective studies. The system of organization should comprise:—

(*a*) Inspection at the ports in order to prevent the arrival of new plant diseases and pests from abroad and comply with the sanitary requirements of the countries receiving plant products.

(*b*) District inspection in order to control diseases existing in the territory.

(*c*) Laboratories of Plant Pathology, Agricultural Entomology and experimental fields for the study of parasites and their control.

(*d*) Professorships of Plant Pathology and Agricultural Entomology at least in one University, for the training of corresponding experts.

The Governments of the two countries shall come to a reciprocal agreement as to the method of carrying out the above-said recommendations.

(5) Each country must draw up, within the shortest possible time, a complete list of plants serving as hosts to pests found in agriculture and a map of its distribution in the country.

(6) In every regulation, both the disease or pest and the plant attacked should be designated by both the common and scientific name.

(7) Each country shall draw up, as soon as possible, a regulation regarding the requirements to which phytoterapeutic products should comply for use in agriculture, and to establish or nominate an organization which shall carry out the said regulation.

(8) Any request tending to the modification of a phytosanitary regulation should be presented with complete scientific documentation and expound the reasons for necessitating this modification.

(9) Both Governments guarantee to take the necessary measures for preventing the export of products from infected regions as originating in healthy or treated zones.

(10) Add to Art. II of the Commercial Agreement:— ' and the necessary apparatus for its application '.

(11) Any measure whatsoever of a phytosanitary regulation character taken in one of the two countries shall be duly communicated to the other.

(12) The consular endorsement of sanitary certificates for samples or consignments having a value inferior to twenty ' sucres ' or five hundred Chilian ' pesos ', shall be free of charge. (*Ibid.*, págs. 1311 y 1312).

United States of America. — By Notice of Quarantine No. 48 (twelfth revision) on account of the Japanese beetle (*Popillia japonica*) have been quarantined the States of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, and West Virginia, and the District of Columbia, effective on and after 1 March, 1937.

Hereafter fruits and vegetables, nursery, ornamental, and green house stock, and other plants, and sand, soil, earth, peat, compost, and manure shall not be shipped, offered for shipment to a common carrier, received for transportation or transported by a common carrier, or carried, transported, moved or allowed to be moved from any of said quarantined States or District into or through any other State or territory or district of the United States in manner or method or under conditions other than those prescribed in the rules and regulations (fifteenth revision) supplemental to said Notice of Quarantine. (*B. E. P. Q. — Q. 48*, [Washington], 1937, 14 pp., 1 map).

*** Amendment No. 2 to revised rules and regulations supplemental to Notice of Quarantine No. 52, on account of the pink bollworm of cotton [*Pectinophora* (*Platyedra*) *gossypiella*], adds the county of Sierra in New Mexico and the Texas counties of Crane, Loving, Upton, and Winkler to the lightly infested areas. While stock raising is the principal industry in these counties,

a small amount of cotton is grown. This is carried into the present adjacent regulated areas for ginning. These counties are, therefore, included to authorize the movement of seed to farms and ranches therein for planting and feeding purposes.

This amendment of regulation 3 was approved on 5 April, 1937 and became effective on and after 6 April of the same year. (*B. E. P. Q. — Q. 52* [Washington], 1937, 2 pp.).

France. — By Decree of 18 June, 1937, the system of temporary admission duty free is extended to petroleum oils, products derived from petroleum and residues intended for the preparation of insecticides or fungicides intended for export. (*Journal officiel de la République française*, Paris, 22 juin 1937, LXIX[e] année, n° 143, p. 6953).

*** By Ministerial Decree of 22 July, 1937, State assistance in the form of subsidies, may only be given to syndicates or federations of syndicates for the control of plant diseases and pests, established in conformity with the Laws of 25 February, 1927 and 3 June, 1927 [see this *Bulletin*, 1927, No. 8, pp. 130-131] the statutes of which have been approved by the Minister of Agriculture and the presidents of which have agreed to comply with the official instructions by signing the declaration annexed to this Ministerial Decree.

These subsidies may only be granted for the following purposes:—

(1) To facilitate the operation of a recently established association (initial subsidy).

(2) To assist towards the purchase of apparatus for collective use (subsidy for purposes of purchase).

(3) To contribute towards the expenses incurred in the control of certain plant pests when control measures are undertaken under the conditions determined by Law of 3 June, 1927.

In no instance whatsoever shall subsidies be granted to more than two communal syndicates in the same commune, two cantonal associations in the same canton, two district associations in the same district, two departmental associations in the same department. (Ministère de l'Agriculture. Direction de l'Agriculture. *Bulletin de l'Office de Renseignements agricoles*, Paris, 1[er] septembre 1937, année 1937, n[os] 16-17, p. 370-371).

India. — By Notification No. F. 116-34-A., dated the 8 April, 1937, it is notified for general information that no charge will be made for the consignments of plants intended for export to countries abroad, which are sent to the Government Fruit Farm, Mirpurkhas, for inspection and certification provided that all incidental charges are borne by the exporters. Consignments may also be made available for inspection and certification work at Karachi. The Chief Agricultural Officer in Sind is authorised to charge a fee of Rs. 20 for each such consignment. (*Agriculture and Live-stock in India*, Delhi, July, 1937, Vol. VII, Pt. IV, p. 545).

Italy. — The Royal Decree-Law No. 1568 of 8 July, 1937, regulates the preparation of and the trade in sugar-beet seed, also from the phytosanitary aspect. (*Gazzetta Ufficiale del Regno d'Italia*, Roma, 18 settembre 1937, anno 78°, n. 218, pp. 3495-3496).

*** The Royal Decree No. 1579 of 8 July, 1937, determines the modalities of application of the Royal Decree-Law No. 642 of 15 April, 1937 [see this *Bulletin*, 1937, No. 7, p. 156] relative to the control of citrus scale insects. *Ibid.*, Roma, 21 settembre 1937, n. 220, pp. 3511-3512).

*** By Decree of the Minister of Finance, dated 16 September, 1937, the aplication of the exchange duty at the reduced rate of 0.50 lire per cent. is extended from 1 October, 1937, to the parasiticides placed on sale under the following denominations:— ' Verderin ', ' Fluoris ', ' Cruscolina ', ' Abruchite ', ' Baflor ', ' Nicol ', ' Nicosan ', ' Anticuscuta ', sodium arsenite, ' Ferfor ', and ' Azurol '. (*Ibid.*, 14 ottobre 1937, n. 240, p. 3800).

Switzerland. — A Decree of the Federal Council, dated 5 June, 1937, establishes the following measures: —

Art. 1. — All consignments of fresh stone and pomaceous fruits, (customs tariff, Nos. 23, 24, *a* and *b*), trees, shrubs, and other living plants, not in tubs or pots (customs tariff, Nos. 209 and 210), parts of plants such as cuttings, seedlings, layers, etc. (customs tariff ex No. 220) originating in the countries designated in Article 3 must be accompanied by a certificate issued by the Phytopathological Service of the country of origin. This certificate drawn up or translated into German, French or Italian testifies that the consignment is free from the San José scale [*Aspidiotus perniciosus*] and other parasites and diseases.

The certificates which accompany the consignments of trees, shrubs, other living plants or parts of plants should also testify that the said consignment has been subjected, in the country of origin, to an efficacious treatment by means of hydrocyanic acid gas, provided with stamped seal in order to prevent these plants being substituted by others not disinfected. The impression of the seal shall be reproduced on the required certificate.

Art. 2. — In respect of all the merchandise listed in Art. 1, the frontier control authorities shall determine whether the consignment is free from the San José scale, other parasites or diseases. Entry is only authorized if the consignment is found to be in a healthy condition. Infected goods shall be refused.

The Division of Agriculture may authorize exceptions to this rule and order disinfection to be carried out at the expense of the holder of the goods.

Art. 3. — The dispositions of this Decree are applicable to consignments originating in the following countries:—

E u r o p e : Austria, Portugal, Rumania, Russia, Spain, Hungary, and Yugoslavia.

A f r i c a : Union of South Africa.

A m e r i c a : All the countries of this Continent.

A s i a : China, Irak and Japan.

Oceania: The Australian Continent, the Hawaiian Islands and New Zealand.

If circumstances demand, the Department of Public Economy may modify the above list.

Art. 4. — The customs offices of Basle, Buchs, Romanshorn, St. Margrethen, Zurich, the free port of Albisrieden, Chiasso, Domodossola, Brigue, Berne, Neuchâtel, Lausanne-Entrepôt, and Geneva allow free entry to the consignments listed in Article 1.

In agreement with the customs authorities, the Division of Agriculture may open further offices for these imports.

Art. 5. — To cover inspection expenses a tax shall be collected on behalf of the Division of Agriculture.

The unloading of the goods for inspection purposes, reloading the bales, opening and repacking of the cases, as well as the assistance required by the expert in carrying out his examination, devolve on the holder of the goods.

Also subject to the tax are consignments entering in transit, but not conveyed directly through Switzerland. When it is established that the merchandise shall be re-exported, the Administration may re-imbourse on the request of the importer, the surplus of the tax paid, after deduction of the expenses incurred for inspection.

Art. 6. — The experts in charge of the inspection of the goods shall be nominated by the Department of Public Economy which shall also determine their duties.

Art. 7. — The above-mentioned dispositions, until further order, are not applicable to fruits, trees, shrubs, other living plants and parts of plants imported in county trading and the small scale commerce of the frontier. The Department of Public Economy is, however, authorized to declare these dispositions applicable if circumstances so indicate. In agreement with the customs authorities, the Division of Agriculture shall draw up the necessary dispositions in respect of this trade.

Art. 8. — With the exception of Article 1, paragraph 1, the present Decree comes into force on 1 July, 1937. This abrogates the Decree of the Federal Council of 28 April, 1928, relative to the import of fresh fruit of American and Australian origin, and that of 25 October, 1932, relative to the import of fresh fruits, trees, shrubs and other living plants originating from Austria and Hungary.

Article 1, paragraph 1, relative to the certificates which accompany the consignments, comes into force on 1 September, 1937. (*Recueil des Lois fédérales*, Berne, 9 juin 1937, nº 22, p. 610-612).

Venezuela. — The presence of the cacao witches' broom disease (*Marasmius perniciosus*) having been verified in Sucre State and Federal Territory Delta Amacuro, by Resolution No. 6 of 15 June, 1937, four officers of the Ministry of Agriculture and Animal Husbandry are charged to supervise the

measures necessary for the effective control of the said disease and preventing it from spreading to non-infected zones. (*Aviso oficial. Campaña contra la enfermedad del cacao denominada " escoba de bruja "*, Caracas, 1937, 1 pág.).

*** By Resolution No. 7 of the same date for preventing the spread of the aforesaid disease in the country, transport is prohibited from Sucre State and Federal Territory Delta Amacuro to other regions of Venezuela of any plant, part of plants, cacao pods and beans, earth, used sacks and also packing cases which have been utilized for cacao unless accompanied by a special certificate from the Ministry of Agriculture and Animal Husbandry, testifying that they do not originate in infected zones.

Ships which have transported cacao coming from zones declared infected, before leaving for other regions of the country shall be subjected to an effective disinfection treatment which will be carried out under the supervision of an agent designated for this purpose by the above-mentioned Ministry. (*Ibid.*).

*** By Resolution No. 8 of the same date and for the same purpose as Resolution No. 7, it is prohibited:—

(*a*) to introduce into the country any plant, fruit, seed or part of the cacao plant, whatever its origin;

(*b*) to bring into the country: (1) any used sack, also if employed for wrapping other products; (2) any packing case or packing material which has been previously utilized in cacao estates or for containing cacao;

(*c*) to introduce soil, irrespective of its place of origin.

Exception is made in respect of the imports effected by the Ministry for research work, and subjected to the requisite precautionary measures. (*Ibid.*).

RECENT BIBLIOGRAPHY

Aczél, Márton. A burgonyabogárveszedelem egyre nö. *Növényvédelem*, Budapest 1937, XIII. évf., 9. sz., 169-173 o., 9 képpel.
[Translation of the Hungarian title:— ' Le danger du doryphore augmente toujours plus '. — *Leptinotarsa decemlineata*].

Ainsworth, G. C. " Enation mosaic " of tomato caused by a virus of the *tobacco virus* 1 type. *The Annals of Applied Biology*, London, 1937, Vol. XXIV, No. 3, pp. 545-556, fig. 1, pls. XXXIV-XXXV. References, p. 555.

Andrews, F. W. Investigations on black-arm disease of cotton under field conditions. II. The effect of flooding infective cotton debris. *The Empire Journal of Experimental Agriculture*, London, 1937, Vol. 7, No. 19, pp. 204-218, figs. 1-4. References, p. 218.
[*Bacterium malvacearum*].

Askew, H. O., Thomson, R. H. K., and Kidson, G. B. The boron status of New Zealand fruit soils. *The New Zealand Journal of Science and Technology*, Wellington, N. Z., 1937, Vol. XVIII, No. 11, pp. 789-796.
[Internal cork of apples develops on soils of low boron content].

ATKINSON, J. D. Injection of apple-trees in New Zealand. *The New Zealand Journal of Science and Technology*, Wellington, N. Z., 1937, Vol. XVIII, No. 11, pp. 797-799. References, p. 799.

AUDANT, André, and OCCÉNAD, Albert. The Mexican cotton boll weevil, *Anthonomus grandis* Boheman, in Haití. *The Journal of Agriculture of the University of Puerto Rico*, Río Piedras, P. R., 1937, Vol. XXI, No. 1, pp. 69-76, 2 graphs, 1 map.

AZEVEDO, Nearch. Relaçâo bibliographica referente a fungos e doenças do cafeeiro. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 213-238. [Translation of the introduction to this paper also in English].

BARBIERI, Nicola Alberto. Action antiparasitaire universelle du Tabacol. *Bulletin mensuel de la Société nationale d'Horticulture de France*, Paris, 1937, 6e sér., tome IV, [nº 8], p. 333-335.

BARBIERI, Nicola Alberto. Une larve apode méconnue vide, par périodes, les nodosités des Légumineuses. *Bulletin mensuel de la Société nationale d'Horticulture de France*, Paris, 1937, 6e sér., tome IV, [nº 8], p. 335-337. [An unknown fly].

BARNES, H. F. The asparagus miner (*Melanagromyza simplex* H. Loew) (Agromyzidae; Diptera). *The Annals of Applied Biology*, London, 1937, Vol. XXIV, No. 3, pp. 574-588, fig. 1, pls. XXXVI-XXXVII. References, pp. 587-588.

BARNES, H. F. The hollyhock seed moth (*Platyedra malvella* Hübn.), together with notes on the distribution of *Apion radiolus* Kirby and an associated *Clinodiplosis* species. *The Annals of Applied Biology*, London, 1937, Vol. XXIV, No. 3, pp. 589-599, fig. 1, pl. XXXVIII. References, p. 599.

BARSS, H. P. The variable properties of potato as a bacteriological culture medium. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, p. 865.

BENATAR, Rubens. Contribuição ao estudo bibliographico de doenças da roseira. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 239-264.

BENINCASA, M. Il campo di allevamento di razze di « Virginia Bright » in Città di Castello. *Bollettino Tecnico del R. Istituto Sperimentale per le Coltivazioni dei Tabacchi « Leonardo Angeloni »*, Scafati, 1937, anno XXXIV, n. 1, pp. 16-50, 15 tav.
[With title and summary also in English:— 'Virginia Bright tobacco breeding in Città di Castello'. — *Inter alia*, the resistance percentage of the different varieties of Virginia Bright tobacco to *Thielavia basicola* is indicated].

BITANCOURT, Agesilau A. A defesa sanitaria vegetal e sua organisação em alguns dos principaes paizes do mundo. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 151-161, fig. 1. Bibliographia, pags. 160-161.

BITANCOURT, A[gesilau] A., e JENKINS, Anna E. Variações de *Elsinoe australis* Bitancourt e Jenkins. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 315-317, fig. 1.

BONDAR, Gregorio. A Phytopathologia e a cultura cacaoeira no Brasil. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 197-198.

BRENCHLEY, Winifred E., and WATSON, D. J. The influence of boron on the second year's growth of sugar beet affected with heart-rot. *The Annals of Applied Biology*, London, 1937, Vol. XXIV, No. 3, pp. 494-503, pls. XXXI-XXXII.

BRIGANTI, Gregorio. Il marciume radicale. Cause predisponenti ed aggravanti. Mezzi di lotta preventivi e curativi. *L'Italia Agricola*, Roma, 1937, anno 74, n. 9, pp. 669-674, figg. 1-6.

BROWN, M. R. A study of crown rust, *Puccinia coronata* Corda, in Great Britain. I. Physiologic specialization in the uredospore stage. *The Annals of Applied Biology*, London, 1937, Vol. XXIV, No. 3, pp. 504-527. References, pp. 526-527.

BRUCK, Eugenio. Interdicções e quarentenas de importações vegetaes. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 167-177.

BUBENTZOV, S. The isolation of Ustilago tritici (Pers.) Rostr. from infected wheat seeds. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 89-94. [Literature], p. 93.
[In Russian, with title and summary also in English].

BUCHHEIM, A. Modern methods of controlling rust in grain crops. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 11-33, figs. 1-2. [Literature], pp. 30-33.
[In Russian, with title also in English. — *Uredales*].

CAMINHA Filho, Adrião. Doenças da canna de assucar no Brasil. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 191-196.

CANONACO, A. Una malattia del Tropaeolum majus L. dovuta ad un Ifale del genere « Oidiopsis » Scal. *Lavori del R. Istituto Botanico di Palermo*, Palermo, 1937, vol. VIII, pp. 31-48, fig. 1, tav. IV. Bibliografia, p. 48.
[*Oidiopsis sicula*].

CAPPELLETTI, Carlo. Osservazioni sulla germinazione dei semi di *Orobanche gracilis* Sm. e *Orobanche crenata* Forsk. (Nota 2ª). *Nuovo Giornale Botanico Italiano* (Nuova serie), Firenze, 1937, vol. XLIV, n. 2, pp. 331-334.

CARNEIRO, João Gonçalves. Nomenclatura phytopathologica e mycologica no Brasil. *Rodriguésia*, Rio de Janeiro, 1936, numero especial, pags. 339-340.

CHAUDHURI, H., KAPUR, V. S., BHATIA, K. L., and ANAND, J. S. Diseases of the tea bush in the Kangra Valley, Punjab, I. *The Indian Journal of Agricultural Science*, Delhi, 1937, Vol. VII, Pt. IV, pp. 565-573, pls. XLIX-L.
[*Pestalozzia theae, Phoma theicola, Colletotrichum camelliae, Guignardia camelliae, Botryodiplodia theobromae, Hendersonia theicola, Cephaleuros mycoidea*].

CHESTER, Frederick D. A bacterial disease of delphinium. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, pp. 855-858, fig. 1.
[*Erwinia phytophthora* on *Delphinium ajacis*].

CHIESA MOLINARI, O. Ensayos sobre "trampas baño" o "trampas cebo" verificados en la Estación Experimental de Alto de Sierra. *Boletín de Agricultura*, Córdoba, 1937, año XVIII, nº 159, págs. 18 a 25, 5 figs.
[Against *Cydia pomonella*].

CHOWDHURY, S. Germination of fungal spores in relation to atmospheric humidity. *The Indian Journal of Agricultural Science*, Delhi, 1937, Vol. VII, Pt. IV, pp. 653-657. References, p. 657.
[*Acrothecium penniseti, Alternaria brassicae, Helminthosporium frumentacei, Cladosporium herbarum, Colletotrichum falcatum, Coll. lindemuthianum, Gloeosporium tabernaemontanae, Phyllosticta cajani*].

CHRISTENSEN, Jorge R. Toxoptera graminum Rondani. "El pulgón verde de los cereales". *Agronomía*, Buenos Aires, 1937, año XXX, nº 155, págs. 38 a 49, 1 fig.

CICCARONE, A. Una virosi del pomodoro (Nota preliminare). *Rivista di Patologia Vegetale*, Pavia, 1937, anno XXVII, nn. 3-4, pp. 73-77, 1 fig. Lavori consultati, p. 77.
[A paper dealing with the disease known as 'fern-leaf' also studied in Italy by R. Gigante (See this *Bulletin*, 1937, No. 8, p. 186)].

COOK, Melville T. The organism causing the dry top rot of sugar cane. *The Journal of Agriculture of the University of Puerto Rico*, Río Piedras, P. R., 1937, Vol. XXI, No. 1, pp. 85-97, pls. V-VII. Literature cited, pp. 95-96. [The writer is of the opinion that the said organism should be kept in the genus *Ligniera* or that there should be a merging of genera as suggested by Palm and Burk in which it would become *Sorosphaeria vascularum*].

CORBETT, G. H., YUSOPE, Mohamed, and HASSAN, Abu. Insects associated with copra in Malaya. *Department of Agriculture, Straits Settlements and Federated Malay States. Scientific Series, No. 20*, Kuala Lumpur, 1937, pp. 1-91, pls. I-IX. Bibliography, pp. 90-91.

COTTON, R. T., and GOOD, N. G. Annotated list of the insects and mites associated with stored grain and cereal products, and of their arthropod parasites and predators. *United States Department of Agriculture. Miscellaneous Publication No. 258*, Washington, D. C., 1937, 81 pp. Literature cited, pp. 63-74.

CRISTINZIO, M. Esperienze intorno alla capacità infettiva della *Rhizoctonia Solani* Kükn a mezzo di tuberi di patata infetti. R. Osservatorio regionale di Fitopatologia di Portici (Napoli): Sezione di Patologia vegetale (Laboratorio di studio e sperimentazione) presso la Facoltà di Agraria della R. Università di Napoli. *Ricerche, osservazioni e divulgazioni fitopatologiche, per la Campania ed il Mezzogiorno*. Portici, 1937, VI, pp. 71-94, figg. 1-2, tav. II-III. Bibliografia, pp. 93-94.

CRISTINZIO, M. Un grave attacco di mosaico nella zucca. R. Osservatorio regionale di Fitopatologia di Portici (Napoli): Sezione di Patologia vegetale (Laboratorio di studio e sperimentazione) presso la Facoltà di Agraria della R. Università di Napoli. *Ricerche, osservazioni e divulgazioni fitopatologiche, per la Campania ed il Mezzogiorno*. Portici, 1937, VI, pp. 95-102, tav. IV-V. Bibliografia, p. 102.

CROSIER, W. F., PATRIK, S. R., and MUNN, M. T. Abnormal germination resulting from improperly galvanized trays. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, pp. 867-868, fig. 1.

DESLANDES, Josué. Os levantamentos phyto-sanitarios sob o ponto de vista da applicação. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 163-166.

DESLANDES, Josué. Doenças da bananeira. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 199-206.

DOWSON, W. J. *Bacterium salicis* Day, the cause of the watermark disease of the cricket-bat willow. *The Annals of the Applied Biology*, London, 1937, Vol. XXIV, No. 3, pp. 528-544, pl. XXXIII. References, p. 544.

DRUMMOND, Octavio A. Notas sobre o combate á septoriose do tomateiro. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 333-336. [*Septoria lycopersici*].

ELIESCU, Gr. Lithocolletis populifoliella Fr. Un fluture vătămător frunzelor de plop. *Revista Pădurilor*, București 1937, an. XLIX, nr. 4, pag. 397-401, 8 fig. Literatură, pag. 401.
[In Rumanian, with title and summary in German:— 'Lithocolletis populifoliella Tr., eine für das Buchenblattwerk schädliche Schmetterlingsart' (p. 401). — On the second page of the cover of this issue of the Review the title of the article in question is translated into French and German as follows:— 'Lithocollotis populifoliella Tr. Un papillon préjudiciable aux feuilles des peupliers'. — 'Lithocolletis populifoliella Tr. Ein für das Pappelblattwerk schädliche Schmetterlingsart'].

ELIESCU, Gr. Laspeyresia strobilella L. Un fluture vătămător conurilor de molid. *Revista Pădurilor*, București 1937, an XLIX, nr. 5, pag. 556-558, 8 fig.

ELLIOTT, Charlotte, MELCHERS, L. E., LEFEBVRE, C. L., and WAGNER, F. A. Pythium root rot of milo. *Journal of Agricultural Research*, Washington, D. C., 1937, Vol. 54, No. 11, pp. 797-834, figs. 1-22. Literature cited, pp. 833-834.
[*Pythium arrhenomanes* on *Sorghum vulgare*].

EVANS, J. W. Notes on fruit flies and some other insect pests at present unestablished in Tasmania. *The Tasmanian Journal of Agriculture*, Hobart, 1937, Vol. VIII (New Series), No. 2, pp. 57-60. References, p. 60.
[*Ceratitis capitata, Dacus ferrugineus, Cydia molesta, Pieris rapae, Halotydeus destructor*].

EVANS, J. W. The light-brown apple moth (*Tortrix postvittana*, Walk.). *The Tasmanian Journal of Agriculture*, Hobart, 1937, Vol. VIII (New Series), No. 3, pp. 125-128, figs. I-III.

EVANS, J. W. The light-brown apple moth (*Tortrix postvittana* Walker). *Supplement to the Tasmanian Journal of Agriculture*, Tasmania, 1937, Vol. VIII, No. 3, pp. 1-18, figs. 1-6. References, p. 18.

EZERSKAJA, E. Chloropicrine as a disinfectant of soil in hot-beds. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 113-120. [Literature], p. 120.
[In Russian, with title also in English].

FAGUNDES, Nestor B., e REGO, Constantino do Valle. Suggestões referentes ás modificações a serem feitas na actual tarifa aduaneira, e relativas a importação de fungicidas, insecticidas e pulverizadores. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 179-183.

FAJARDO, T. G. The tomato leafmold (*Cladosporium fulvum* Cke.), a new serious disease of tomato in Baguio, Mountain Province. *The Philippine Journal of Agriculture*, Manila, 1937, Vol. 8, No. 2, pp. 163-186, pls. 1-12. Literature, pp. 182-183.

FEDORINTCHIK, N. The influence of some fungicides on the spores of Plasmodiophora brassicae. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 176-178.
[In Russian, with title also in English].

FEYTAUD, J[ean]. La question doryphorique au début de la campagne 1937. *Revue de Zoologie agricole et appliquée*, Bordeaux, 1937, 36e année, nº 4, p. 49-64, fig. 9.
[*Leptinotarsa decemlineata*].

FEYTAUD, J[ean]. Escargots et limaces. *Revue de Zoologie agricole et appliquée*, Bordeaux, 1937, 36e année, nº 5, p. 65-80, fig. 10-12. Bibliographie, p. 80.
[*Helix, Limax, Agriolimax, Milax, Arion*].

FISCHER, G. J. La lucha contra las royas. *Agronomía*, Buenos Aires, 1937, año XXX, nº 155, págs. 3 a 8, 4 figs. [Bibliografía], págs. 7 y 8.
[*Puccinia*].

FISHER, Ronald C. Studies of the biology of the death-watch beetle, *Xestobium rufovillosum* De G. I. A summary of past work and a brief account of the developmental stages. *The Annals of Applied Biology*, London, 1937, Vol. XXIV, No. 3, pp. 600-613, figs. 1-5. References, pp. 612-613.

FLEISCHMANN, Rudolf. Beobachtungen über das Welken der Linsen. *Pflanzenbau*, Leipzig 1937, 14. Jahrg., Heft 2, S. 49-56, Abb. 1-3.
[*Fusarium* ?].

FLEMING, Walter E., BAKER, Francis E., and KOBLITSKY, Louis. Effect of applying acid lead arsenate for control of Japanese beetle larvae on the germination and development of overgreen seedlings. *Journal of Forestry*, Washington, D. C., 1937, Vol. 35, No. 7, pp. 679-688, figs. 1-2.
[*Popillia japonica*].

FOSTER, H. H. Studies of the pathogenicity of Physalospora obtusa. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, pp. 803-823, figs. 1-7. Literature cited, p. 822-823.

FRANCKE-GROSMANN, Helene. Oekologie und Schadwirkung von Dreyfusia Prelli Grosmann. *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1937, 47. Jahrg., Heft 10, S. 497-516, Taf. 1-2. Literaturverzeichnis, S. 515-516.

FRAPPA, C. Les principaux insectes nuisibles aux cultures de Madagascar. *Revue de Botanique appliquée et d'Agriculture tropicale*, Paris, 1937, 17e année, nº 191, p. 513-516.

FRICKHINGER, H. W. In Ausbreitung begriffene Schädlingsplagen. *Forstwissenschaftliches Centralblatt*, Berlin 1937, 59. Jahrg., Heft 18, S. 592-594.

FRIEDRICHSON, G. The wheat rust in the Trans-Volga irrigated districts. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 35-50. [Literature], pp. 49-50. [In Russian, with title also in English. — *Puccinia*].

FRITZ, Friedrich. Beiträge zur Pathologie der Zellmembran. *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1937, 47. Jahrg., Heft 10, S. 532-541, Abb. 1-9. Literatur, S. 536-537 und 541.

GALANG, F. G., and LAZO, Felix D. The setting of Carabao mango fruits as affected by certain sprays. *The Philippine Journal of Agriculture*, Manila, 1937, Vol. 8, No. 2, pp. 187-211, figs. 1-2, charts 1-2. Literature cited, p. 210.

GARRETT, S. D. The soil-borne fungus diseases of field and plantation crops: a review of existing control methods. *The Empire Journal of Experimental Agriculture*, London, 1937, Vol. V, No. 19, pp. 189-196. References, p. 196.

GEORGI, C. D. V. The toxic content of haiari or cubé root. *The Malayan Agricultural Journal*, Kuala Lumpur, 1937, Vol. XXV, No. 8, pp. 334-337. References, p. 337.
[*Lonchocarpus chrysophyllus, L. martynii*].

GHOSE, T. P. [and] KRISHNA, S. Occurrence of rotenone in *Milletia pachycarpa*. *Current Science*, Bangalore, 1937, Vol. VI, No. 2, p. 57.

GOBBATO, Celeste. Principaes pragas e molestias das vides cultivadas no Rio Grande do Sul. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 187-190.

GONÇALVES, Cincinnato Rory. Considerações sobre a transmissão de doenças das plantas pelos insectos. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 121-129, figs. 1-2. Bibliographia, pags. 128-129.

GRANDORI, Remo. Contro la tignola orientale del pesco (*Cydia molesta*). Consigli ai frutticultori mantovani. *Bollettino di Zoologia agraria e Bachicoltura*, Torino, 1937, vol. VII [1936], pp. 171-188, figg. 1-9.

GRANDORI, Remo, PROVASOLI, Luigi, MARIANI, Giovanni. Rifugi invernali delle larve di *Cydia molesta* e lotta contro di essa mediante l'acido cianidrico. *Bollettino di Zoologia agraria e Bachicoltura*, Torino, 1937, vol. VII (1936), pp. 189-195.

GRILLO, Heitor V. Silveira. Lista preliminar dos fungos assignalados em plantas do Brasil. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 39-96. Bibliographia citada, pag. 96.

GRILLO, Heitor V. Silveira. As necessidades da Phytopathologia no Brasil. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 109-113.

GROVE, W. B. British stem- and leaf-fungi (Coelomycetes). A contribution to our knowledge of the Fungi Imperfecti belonging to the Sphaeropsidales and the Melanconiales. Vol. II: Sphaeropsidales comprising Sphaerioideae, with co-

loured spores; Nectrioideae, Excipulaceae and Leptostromataceae; and Melanconiales. London, Cambridge University Press, 1937, XII + 407 pp., 102 figs.
[For the first volume, see this *Bulletin*, 1936, No. 4, p. 88].

HERSCHLER, Albert. Magnesiumsulfat-Kalkbrühe als Träger von Arsenmitteln. *Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin 1937, 17. Jahrg., Nr. 9, S. 71.

HILDEBRAND, E. M. Infectivity of the fire blight organism. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, pp. 850-852. Literature cited, p. 852.
[*Ervinia amylovora*].

HOCHAPFEL, H. Stärkeres Auftreten von *Phytomyza rufipes* in Schlesien. *Anzeiger für Schädlingskunde*, Berlin 1937, XIII. Jahrg., Heft 9, S. 114-115, Abb. 1-3.
[Literatur], S. 115.

HOFMANN, Christoph. Tannenlaus und Tannensterben. *Forstwissenschaftliches Centralblatt*, Berlin 1937, 59. Jahrg., Heft 15, S. 469-487, Abb. 1-5. Schrifttum, S. 486-487.
[*Dreyfusia nüsslini*].

HOFMANN, Chr[istoph]. Nonnenfalterkontrolle auf biologischer Grundlage. *Forstwissenschaftliches Centralblatt*, Berlin 1937, 59. Jahrg., Heft 17, S. 549-551. Abb. 1.
[*Lymantria monacha*].

HOSSLI, Hans. La processionnaire du pin dans les forêts du Tessin. *Journal forestier suisse*, Berne, 1937, 8me année, nº 9/10, p. 196-200, 2 pl.
[*Cnethocampa pityocampa*].

HSIONG, S. L., and HILDEBRAND, E. M. Maternal inheritance in pears. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, pp. 861-862.
[*Erwinia amylovora*].

ISAAKIDÈS, C. A. Liste II des insectes et autres animaux nuisibles aux plantes cultivées et des insectes auxiliaires de la Grèce. *Annales de l'Institut Phytopathologique Benaki*, Kiphissia (Athènes), 1936, année 2, fasc. 1, p. 5-7.
[Prepared according to the specimens studied at the Benaki Phytopathological Institute during the years 1934 and 1935. — For the first list, see this *Bulletin*, 1936, No. 8, p. 185].

ISAAKIDÈS, C. A. L'Eumarchalia (Schizomyia) gennadii (P. Marchal) en Crète. *Annales de l'Institut Phytopathologique Benaki*, Kiphissia (Athènes), 1936, année 2, fasc. 1, p. 17-25, pl. I-II.

ISAAKIDÈS, C. A. La puissance attractive de la mélasse pour la mouche des olives. *Annales de l'Institut Phytopathologique Benaki*, Kiphissia (Athènes), 1936, année 2, fasc. 1, p. 26-34.
[*Dacus oleae*].

IVANOVA, N., and NEMIRITZKY, B. The estimation of insecticides for quarantine disinfection of living plants against scale-insects by submersion in toxic solutions. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 129-135.
[In Russian, with title and summary also in English].

JAAG, Otto. Sur une nouvelle maladie du sapin blanc et de l'épicéa. *Journal forestier suisse*, Berne, 1937, 8mè année, nº 9/10, p. 201-203, pl. 1-2.
[*Pleurotus mitis*].

JACK, Rupert W. Southern Rhodesia. Locust invasion, 1932-37. Monthly Report No. 56. July, 1937. *The Rhodesia Agricultural Journal*, Salisbury, 1937, Vol. XXXIV, No. 9, p. 758.
[*Nomadacris septemfasciata*].

JACOBS, S. E., and RAICHOUDHURY, D. P. Some characteristics of *Ephestia kühniella* Z. reared under aseptic conditions. *The Annals of Applied Biology*, London, 1937, Vol. XXIV, No. 3, pp. 632-650, fig. 1, pl. XL. References, p. 650.

JANCKE, O. Traubenwicklerzucht im Laboratorium. *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1937, 47. Jahrg., Heft 10, S. 516-526, Abb. 1-3. Schrifttum, S. 525-526.
[*Clysia ambiguella, Polychrosis botrana*].

JENKINS, Anna E., e BITANCOURT, A[gesilau] A. Doenças das plantas causadas por fungos dos generos *Elsinoe* e *Sphaceloma*. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 305-313, fig. 1. Bibliographia, pags. 311-313.
[With summary in English].

JOVINO, Fausto. Produzione olearia e lotta al cicloconio. *Giornale di Agricoltura della Domenica*, Roma, 1937, anno XLVII, n. 39, p. 328, 1 fig.
[*Cycloconium oleaginum*].

KLEMM, M. Pflanzenschutzmeldedienst und Erzeugungsschlacht. *Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin 1937, 17. Jahrg., Nr. 9, S. 69-70. Schriftenverzeichnis, S. 70.

KOKIN, A. Physiological study of the injuriousness of common mosaic disease of tobacco Dubeck Nikitsky No. 44. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 95-112. [Literature], pp. 110-111.
[In Russian, with title and summary also in English].

KOKIN, A., and VOSKOBOYNIKOVA, V. The effect of treating spring wheat seeds with naphthaline. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 179-181.
[In Russian, with title also in English].

KORAB, I. On the measures of controlling Bruchus pisorum L. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 184-185.
[In Russian, with title also in English].

KRUG, H. P. Fusarium como causador da murcha do algodoeiro no Brasil. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 319-321.
[*Fusarium vasinfectum* forma 1].

KVÍČALA, Bohumir. Náchylnost odrůd soji ku bakterielní spále, zjištěná umělou infekcí. Předběžné sdělení. *Sborník Československé Akademie Zěmědelské*, Praha 1937, roč. XII, seš. 3, str. 266-271, 4 obr. Literatura, str. 270.
[In Czechoslovakian, with title and summary also in German:— 'Neigung der Sojabohnen – Sorten zum Bakterienbrand, die durch die künstliche Infektion festgestellt wurde'. – *Bacterium glycineum*].

LAROSE, E., et VANDERWALLE, R. Quelques résultats d'infection artificielle d'*Ustilago nuda tritici* Schaff. sur le froment. *Bulletin de l'Institut agronomique et des Stations de Recherches de Gembloux*, Gembloux, 1937, tome VI, nº 2, p. 81-87. Bibliographie, p. 86.
[With titles and summaries also in Flemish, German, and English:— 'Enige uitslagen ven kunstmatige besmetting van de tarwe met *Ustilago nuda tritici*, Schaff.' — 'Einige Ergebnisse künstlicher Weizeninfektion mittels *Ustilago nuda tritici*, Schaff.'. — 'A few results of artificial loose smut infection (*Ustilago nuda* Schaff.) on wheat'].

LAUBERT, R. Eine wenig bekannte Schädigung von Blütenbegonien. *Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin 1937, 17. Jahrg., Nr. 9, S. 72.
[*Pegomyia bicolor* on *Begonia semperflorens*].

LINFORD, M. B. The feeding of the root-knot nematode in root tissue and nutrient solution. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, pp. 824-835, figs. 1-2. Literature cited, p. 835.
[*Heterodera marioni*].

MALENOTTI, Ettore. Polemica sopra una data. Piralide e sesamia del mais. *Giornale di Agricoltura della Domenica*, Roma, 1937, anno XLVII, n. 38, p. 318. [Remarks on the article of E. Zanini (See this *Bulletin*, 1937, No. 10, p. 244). *Pyrausta nubilalis* and *Sesamia cretica* (not *Leucania zeae*)].

MALENOTTI, Ettore. Ancora due parole su piralide e sesamia del mais. Un diminutivo a posto. *Giornale di Agricoltura della Domenica*, Roma, 1937, anno XLVII, n. 40, p. 336.

MAMONOV, B. The Hessian fly in northern districts of wheat acclimatization. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 143-158, fig. 1. [Literature], p. 157.
[In Russian, with title and summary also in English. — *Mayetiola destructor*].

MARCHAL, Em. Observations et recherches effectuées à la Station de Phytopathologie de l'Etat, pendant l'année 1936. *Bulletin de l'Institut agronomique et des Stations de Recherches de Gembloux*, Gembloux, 1937, tome VI, nº 2, p. 73-80. Publications phytopathologiques du personnel de la Station pendant l'année 1936, p. 79.
[With titles and summaries also in Flemish, German and English:— 'Onderzoekingen en waarneming gedaan aan het Rijksstation over plantenziektenleer gedurende het jaar 1936'. — 'Forschungen und Beobachtungen ausgeführt an der Staatslandwirtschaftlichen Versuchsstation für Pfanzenkrankheiten während des Jahres 1936'. — 'Researches and observations carried out at the Station of Phytopathology of the State, during the year 1936'].

MARCHIONATTO, Juan B. Los hongos parásitos de las plantas cultivadas (Estado actual de nuestros conocimientos). *Agronomía*, Buenos Aires, 1937, año XXX, nº 155, págs. 50 a 62.

MEHTA, P. R. A fruit rot of apples caused by a species of *Rhizopus*. *Current Science*, Bangalore, 1937, Vol. VI, No. 2, pp. 58-59, fig. 1.

MILANEZ, Fernando. Notas sobre duas galhas brasileiras. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 131-142, fig. 1; est. 1-8. Referencias, pag. 140.
[*Eudiplosis brasiliensis* on *Manihot*; *Calorileya* sp. on *Cattleya guttata*].

MILBRATH, J. A. An indication of seed transmission of mosaic virus in tomato seed. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, pp. 868-869.

MINERBI, Giuseppe. I danni della *Theba carthusiana* O. F. Müller alla coltivazione della canapa. *Rivista di Patologia Vegetale*, Pavia, 1937, anno XXVII, nn. 3-4, pp. 79-82, figg. 1-3.

MÜLLER, Albert S. Observações sobre o ensino de Phytopathologia no Brasil. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 145-147.

MÜLLER, Albert S. Tres especies de Septobasidium sobre Citrus em Minas Geraes. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 351-354. [*Septobasidium pseudopedicellatum*, *Septob. lepidosaphis*, *Septobasidium* sp.].

MUNDKUR, B. B., PAL, B. P., and NATH, Pushkar. Relative susceptibility of some wild and cultivated potato varieties to an epidemic of late-blight at Simla in 1936. *The Indian Journal of Agricultural Science*, Delhi, 1937, Vol. VII, Pt. IV, pp' 627-632, pl. LII. References, p. 632.
[*Phytophthora infestans*].

NAUMOVA, N. Natural fluctuations of temperature and duration of incubation period of Puccinia glumarum f. tritici. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 51-66, figs. 1-4. [Literature], p. 65.
[In Russian, with title and summary also in English].

NISIKADO, Yosikazu, and HIRATA, Kôzi. Studies on the longevity of sclerotia of certain fungi, under controlled environmental factors. *Berichte des Ōhara Instituts für landwirtschaftliche Forschungen*, Kurashiki 1937, Bd. VII, Heft 4, S. 535-547. References, S. 547.
[*Sclerotinia trifoliorum, Scl. libertiana, Scl. minor, Sclerotium oryzae, Hypochnus sasakii, H. centrifugus*].

NISIKADO, Yosikazu, and YAMAUTI, Kiyû. On *Neocosmospora vasinfecta* Smith, a causal fungus of seedling-wilt of silk-tree, *Albizzia Julibrissin* Durazz. *Berichte des Ōhara Instituts für landwirtschaftliche Forschungen*, Kurashiki 1937, Bd. VII, Heft 4, S. 549-556, pls. XXVII-XXIX. References, S. 555-556.

NISIKADO, Yosikazu, and YAMAUTI, Kiyû. Temperature relations to the vegetative and reproductive growth and the pathogenicity of *Neocosmospora vasinfecta* Smith. *Berichte des Ōhara Instituts für landwirtschaftliche Forschungen*, Kurashiki 1937, Bd. VII, Heft 4, S. 557-572, graph I, pl. XXX. References, S. 572.

NOBLE, R. J. HYNES, H. J., MAGEE, C. P., MCCLEARY, F. C., BIRMINGHAM, W. A., EDWARDS, E. T., BROWN, H. P. The occurrence of plant diseases in New South Wales with particular reference to the three-year period ending 30th June, 1936. *Department of Agriculture, New South Wales. Science Bulletin No.* 57, Sydney, 1937, 42 pp., 11 figs.

NOVOTELNOVA, N. Influence of temperature and humidity on germination of Phytophthora infestans conidia. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 79-88, figs. 1-3. [Literature], pp. 86-87.
[In Russian, with title and summary also in English].

PAPADOPOULOU, A. Unkrautsämereien aus Weizenausputz verschiedener Landschaften Griechenlands. 1. Mitteilung. *Annales de l'Institut Phytopathologique Benaki*, Kiphissia (Athènes), 1936, année 2, fasc. 1, p. 13-16.

PAVARI, A[ldo], [e] GOIDÀNICH, G[abriele]. Verso la risoluzione del problema della "moria dell'olmo". *Giornale di Agricoltura della Domenica*, Roma, 1937, anno XLVII, n. 40, p. 336.
[*Graphium ulmi*].

PEREIRA COUTINHO, M. F. Combate á mosca das frutas pelos liquidos atractivos. *"Noticias" Agricola*, Lisboa, 1937, ano V, nº 239, pag. 5, 1 fig.
[*Ceratitis capitata*].

PICKEL, Bento. Lista das molestias e dos fungos parasitarios das plantas cultivadas em Pernambuco. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 207-212.

PIERCE, W. H. Legume viruses in Idaho. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, pp. 836-843, figs. 1-2. Literature cited, p. 843.

PIETSCH, Albert. Unkrautsamen und Unkrautfrüchte. Stuttgart, Kosmos, Gesellschaft der Naturfreunde, 1937, 16 S., 64 Abb. (Kosmos Bändchen, Nr. 147).

PONTIS, Rafael E. La tuberculosis del olivo. *Boletín Agrícola*, Mendoza, 1937, año V, nº 5 y 6, págs. 16 a 18, fig. 1.
[*Phytomonas* (*Bacterium*) *savastanoi*].

PRINZ, J. Zur Frage der Virulenzveränderung der Reblaus-Biotypen. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 137-142.
[In Russian, with title and summary also in German. — *Phylloxera*].

PRUTHI, Hem Singh, and SAMUEL, C. K. Entomological investigations on the leaf-curl disease of tobacco in North Bihar. I. Transmission experiments with some suspected insect vectors. II. An alternative host of the virus and the insect transmitter. *The Indian Journal of Agricultural Science*, Delhi, 1937, Vol. VII, Pt. IV, pp. 659-670, pls. LVI-LVIII. References, p. 665.

PUECHER PASSAVALLI, L. Difesa preventiva e curativa della fragola da malattie ed insetti nocivi. *Bullettino della R. Società Toscana di Orticultura*, Firenze, 1937, anno LXII, nn. 3-4, pp. 55-60, 2 figg.; nn. 7-8, pp. 122-125, 2 figg.

PUTTEMANS, Arsène. Algunos dados para servir á historia da Phytopathologia no Brasil e ás primeiras notificações de doenças de vegetaes neste paiz. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 17-36, 2 retr.

PUTTEMANS, Arsène. Computo das especias de « ferrugens » verdadeiras (Uredinales) assignaladas no Brasil e paizes limitrophes. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 97-105.

PUTTEMANS, Arsène. Relação dos fungos e bacterias encontrados na batateira (*Solanum tuberosum*). *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 265-302.

PUTTEMANS, Arsène. Reivindicação visando a denominação scientifica da doença da batateira (*Phytophthora infestans* (Mont.) de By.). *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 341-350. Bibliographia, pags. 349-350.

[With summary also in French. — The causal agent of the potato blight having been described on 19 August, 1845 by Miss Libert under the name of *Botrytis vastatrix* and on 30 August of the same year by Montagne under the name of *B. infestans*, the A. of this paper now proposes the name of *Phytophthora devastatrix* (Lib.) n. comb.].

RĂDULESCU, E. Experienţe asupra eficacităţii preparatelor Katakilla şi Drymac Nr. 2 în combaterea omizilor fluturelui alb de varză (Pieris brassicae L.). *Agricultura Nouă*, Cluj 1937, an. IV, no. 9, pag. 305-309, fig. 1.

RAHMAN, Khan A., and BHARDWAJ, Nand Kishore. The grape-vine thrips (*Rhipiphorothrips cruentatus* Hood) [Thripidae: Terebrantia: Thysanoptera]. *The Indian Journal of Agricultural Science*, Delhi, 1937, Vol. VII, Pt. IV, pp. 633-651, pls. LIII-LV. References, p. 651.

RANGEL, Jeffersson Firth. A podridão preta do abacaxi. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 329-332.

[*Thielaviopsis paradoxa*].

RAVIKOVITCH, S., and BIDNER, N. The deterioration of grape-vines in saline soils. *The Empire Journal of Experimental Agriculture*, London, 1937, Vol. V, No. 19, pp. 197-203, pls. 6-7. References, p. 203.

RAWITSCHER, Felix. Sobre picadas dos Aphideos. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 117-118.

REINKING, Otto A. Isolations made from heart rot of banana in Honduras. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, pp. 853-854. Literature cited, p. 854.

[*Fusarium moniliforme*].

RICHTER, H. Blatt-, Stengel- und Hülsenflecken an Lupinen. *Nachrichtenblatt für den Deutschen Pflanzenschutzdienst*, Berlin 1937, 17. Jahrg., Nr. 10, S. 77-80, Abb. 1-9. Schriftennachweis, S. 80.

[*Macrosporium sarcinaeforme* (?) and *Ceratophorum setosum* on *Lupinus* spp.].

RIEHM, E. Gesetz zum Schutze der landwirtschaftlichen Kulturpflanzen. *Die Umschau*, Frankfurt a. M. 1937, 41. Jahrg., Heft 38, S. 863-864.

[See also this *Bulletin*, 1937, No. 8, p. 191].

RÖDER, K. Phyllosticta cannabis (Kirchner ?) Speg. eine Nebenfruchtform von Mycosphaerella cannabis (Winter) n. c. *Zeitschrift für Pflanzenkrankheiten (Pflanzenpathologie) und Pflanzenschutz*, Stuttgart 1937, 47. Jahrg., Heft 10, S. 526-531, Abb. 1-4. Literaturnachweis, S. 531.

RUEHLE, Geo. D. A strain of Alternaria citri Ellis and Pierce causing a leaf spot of rough lemon in Florida. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, pp. 863-865, fig. 1.

SABUROVA, P. Determination of loose smut infection in wheat by the developing ear. (Preliminary note). *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 171-173, figs. 1-2.
[In Russian, with title also in English. — *Ustilago*].

SAREJANNI, J. A. Liste II des maladies des plantes cultivées et autres de la Grèce. *Annales de l'Institut Phytopathologique Benaki*, Kiphissia (Athènes), 1936, année 2, fasc. 1, p. 8-12.
[Prepared according to the specimens studied at the Benaki Phytopathological Institute during the years 1934 and 1935. — For the first list, see this *Bulletin*, 1936, No. 8, p. 188].

SAREJANNI, J. A. La pourriture du collet des Solanées cultivées et la classification du genre Phytophthora. *Annales de l'Institut Phytopathologique Benaki*, Kiphissia (Athènes), 1936, année 2, fasc. 1, p. 35-52. Bibliographie, p. 51-52.
[*Phytophthora* spp.].

SAREJANNI, J. A. Un parasite nouveau du caroubier. *Annales de l'Institut Phytopathologique Benaki*, Kiphissia (Athènes), 1936, année 2, fasc. 1, p. 53-56. Bibliographie, p. 56.
[*Diplosclerophoma* (*Diplodina*) *ceratoniae* n. sp., a secondary parasite of the fruits of *Ceratonia siliqua*. A Latin diagnosis of this species is appended].

SEÍN, Jr., Francisco. The development of the giant Surinam toad, *Bufo marinus* L. *The Journal of Agriculture of the University of Puerto Rico*, Río Piedras, P. R., 1937, Vol. XXI, No. 1, pp. 77-78, figs. 1-3.
[See the article of G. N. Wolcott: this *Bulletin*, 1937, No. 11, p. 268].

SKEVTCHENCHO, M. Liriomyza cicerina Rond. and its importance to cultivation of Cicer arietinum. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 159-170, figs. 1-6. [Literature], pp. 169-170.
[In Russian, with title and summary also in English].

SILBERSCHMIDT, Karl. A importancia do methodo de enxertia em immunologia vegetal. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 119-120.

SIMMONDS, H. W. Fruit fly trapping experiments. *Agricultural Journal*, Suva, Fiji, 1937, Vol. 8, No. 3, pp. 13-14.
[*Chaetodacus passiflorae*].

SIMMONDS, H. W. Fruit fly. *Agricultural Journal*, Suva, Fiji, 1937, Vol. 8, No. 3, p. 23.
[*Chaetodacus*].

SIMMONDS, H. W. The biological control of the weed Clidemia hirta, commonly known in Fiji as the "Curse". *Agricultural Journal*, Suva, Fiji, 1937, Vol. 8, No. 3, pp. 37-39. References, p. 39.

SIMMONDS, H. W. The giant toad. *Agricultural Journal*, Suva, Fiji, 1937, Vol. 8, No. 3, pp. 45-46.
[*Bufo marinus*].

SMITH, Clayton O. Crown gall on incense cedar, Libocedrus decurrens. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, pp. 844-849, figs. 1-3. Literature cited, p. 849.
[*Pseudomonas tumefaciens*].

SNELL, Walter H. Three thousand mycological terms. Illustrations by Henry A. C. Jackson. [Lancaster, Pennsylvania, Science Press Printing Company], 1936, 151 pp., 12 pls. (Publication No. 2 of the Rhode Island Botanic Club, Providence, R. I.).

[A volume which may be useful to those who are not expert mycologists or who find it difficult to discover the meanings of many terms in present day mycological literature. It includes the technical terms used in college courses in the morphology of the fungi and in mycology. In addition, it aims to give the special meanings of technical and ordinary words or phrases used particularly in describing the higher fungi, for the benefit of amateur mycologists.

Numerous figures assist in the easier understanding of the technical terms comprised in this dictionary].

STAHEL, Gerold. Notes on Cercospora leaf spot of bananas (*Cercospora musae*). *Tropical Agriculture*, Trinidad, B. W. I., 1937, Vol. XIV, No. 9, pp. 257-264, pls. I-VIII. References, p. 264.

STAPP, C., und BUCKSTEEG, W. Untersuchungen über die Beeinflussbarkeit mikrobiologischer Vorgänge im Boden durch das Unkrautbekämpfungsmittel Natriumchlorat. *Zentralblatt für Bakteriologie, Parasitenkunde und Infektionskrankheiten*, II. Abt., Jena 1937, 97. Bd., Nr. 1/3, S. 1-33, Abb. 1-18. Literaturverzeichnis, S. 33.

STEINER, G. Observations on the yam nematode (Rotylenchus bradys [Steiner & Le Hew, 1933]) Filipjev, 1936. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, pp. 865-867, fig. 1.

STELZNER, G. Resistenzzüchtung bei Kartoffeln. *Forschungsdienst*, Berlin 1937, Bd. 4, Heft 6, S. 261-266. Schrifttum, S. 266.

TARTAKOWSKY H., Sergio. La gomosis y la pudrición parda de los citrus. *Boletín de la Sociedad Agrícola del Norte*, La Serena (Chile), 1937, año 25, nº 7, págs. 158 a 160.

[*Pythiacystis* (*Phytophthora*) *citrophthora*].

TILEMANS, Em. Quelques notes concernant le poudrage des forêts. *Bulletin de l'Institut agronomique et des Stations de Recherches de Gembloux*, Gembloux, 1937, tome VI, nº 2, p. 88-119. Bibliographie, p. 107-118.

[With titles and summaries also in Flemish, German and English :— ' Einige nota's over boschbestuiving '. — ' Etliche Anmerkungen über Waldbestäubung '. — ' A few notes on forest dusting ']

TOMPKINS, C. M., and TUCKER, C. M. Phytophthora rot of honeydew melon. *Journal of Agricultural Research*, Washington, D. C., 1937, Vol. 54, No. 12, pp. 933-944, figs. 1-4. Literature cited, p. 944.

[*Phytophthora capsici* on *Cucumis melo* var. *inodorus*].

TRINCHIERI, Giulio. Avvenire economico dell'Impero. Il cotone: nemici e malattie. *Giornale di Agricoltura della Domenica*, Roma, 1937, anno XLVII, n. 39, p. 327, 3 figg.

[A survey of cotton pests and diseases observed up-to-date in Africa, stressing the necessity of phytosanitary research work also in Ethiopia].

TROTTER, A[lessandro]. Contributi alla patologia del nocciuolo. R. Osservatorio regionale di Fitopatologia di Portici (Napoli): Sezione di Patologia vegetale (Laboratorio di studio e sperimentazione) presso la Facoltà di Agraria della R. Università di Napoli. *Ricerche, osservazioni e divulgazioni fitopatologiche*,

per la Campania ed il Mezzogiorno. Portici, 1937, VI, pp. 1-70, figg. 1-16, tav. I. Bibliografia, pp. 67-70.
[See also this *Bulletin*, 1933, No. 9, p. 215. — The A. describes his research work and observations on seed abortion of *Corylus avellana*].

TROTTER, A[lessandro]. La lotta diretta contro le ruggini del frumento. R. Osservatorio regionale di Fitopatologia di Portici (Napoli): Sezione di Patologia vegetale (Laboratorio di studio e sperimentazione) presso la Facoltà di Agraria della R. Università di Napoli. *Ricerche, osservazioni e divulgazioni fitopatologiche, per la Campania ed il Mezzogiorno.* Portici, 1937, VI, pp. 103-107, 1 fig. Bibliografia, p. 107.
[*Uredinales*].

TROTTER, A[lessandro]. I trattamenti polverulenti contro la peronospora della vite. R. Osservatorio regionale di Fitopatologia di Portici (Napoli): Sezione di Patologia vegetale (Laboratorio di studio e sperimentazione) presso la Facoltà di Agraria della R. Università di Napoli. *Ricerche, osservazioni e divulgazioni fitopatologiche, per la Campania ed il Mezzogiorno.* Portici, 1937, VI, pp. 108-110.
[*Plasmopara viticola*].

TROTTER, A[lessandro]. La "maculazione ad anello" nelle foglie del tabacco. *Bollettino Tecnico del R. Istituto Sperimentale per le Coltivazioni dei Tabacchi « Leonardo Angeloni »*, Scafati, 1937, anno XXXIV, n. 1, pp. 51-60, tav. I-VI. Bibliografia, pp. 57-59.
[With title and summary also in English:— " The ' ringspot disease ' of tobacco leaf ". — A virus disease].

TZYGANKOV, S. Baiting as a means for controlling Tenebrionidae injuring cucurbits. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 181-184.
[In Russian, with title also in English].

UNITED STATES DEPARTMENT OF AGRICULTURE. DIVISION OF FOREST PATHOLOGY, BUREAU OF PLANT INDUSTRY, in cooperation with the Forest Products Laboratory, Forest Service, Madison, Wisconsin. List of publications relating to fungous defects in forest products including decay in trees. [Washington, D. C.], 1937, 20 pp.

VASUDEVA, R. Sahai. Studies on the root-rot disease of cotton in the Punjab. IV. The effect of certain factors influencing incidence of the disease. *The Indian Journal of Agricultural Science*, Delhi, 1937, Vol. VII, Pt. IV, pp. 575-587, figs. 1-4. References, p. 587.
[*Rhizoctonia solani* and *Rhiz. bataticola*].

VAVILOV, N. New achievements in rust control abroad. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 5-10.
[In Russian, with title in English. — *Uredales*].

VON UBISCH, G. A alteração da morphologia de flores pelos Ustilaginales. *Rodriguésia*, Rio de Janeiro, 1936, anno II, numero especial, pags. 323-327.

WALKER, J. C. Injury to cabbage by lightning. *Phytopathology*, Lancaster, Pa., 1937, Vol. 27, No. 8, pp. 858-861, figs. 1-2.

WARD, F. S. Deterioration of copra caused by bacteria and moulds. *Department of Agriculture, Straits Settlements and Federated Malay States. Scientific Series*, No. 20, pp. 95-108, 2 pls. References, p. 108.

WARINGTON, Katherine. Observations on the effect of molybdenum on plants with special reference to the Solanaceae. *The Annals of Applied Biology*, London, 1937, Vol. XXIV, No. 3, pp. 475-493, figs. 1-8, pl. XXX. References, p. 493.

WATSON (HAMILTON), Marion A. Field experiments on the control of aphis-transmitted virus diseases of *Hyoscyamus niger*. *The Annals of Applied Biology*, London, 1937, Vol. XXIV, No. 3, pp. 557-573, figs. 1-2. References, p. 573.

WICKENS, G. M. Report of the Division of Plant Pathology for year ending December, 1936. *The Rhodesia Agricultural Journal*, Salisbury, 1937, Vol. XXXIV, No. 9, pp. 689-696.

WOLCOTT, George N. What the giant Surinam toad, *Bufo marinus* L., is eating now in Puerto Rico. *The Journal of Agriculture of the University of Puerto Rico*, Río Piedras, P. R., 1937, Vol. XXI, No. 1, pp. 79-84. Literature cited, p. 84.
[In this respect, see the article of F. Sein, Jr. (*Bulletin*, 1937, No. 11, p. 265). — The introduction of *B. marinus* into Puerto Rico for the control of white grubs (*Phyllophaga* = *Lachnosterna* spp.) was not only an immediate and temporary success, but tends, at least so far as the food habits of the toad determine its trend, continually to become more effective and more permanent].

WOLLENWEBER, H. W., und HOCHAPFEL, H. Beiträge zur Kenntnis parasitärer und saprophytischer Pilze. IV. Coniothyrium und seine Beziehung zur Fruchtfäule. *Zeitschrift für Parasitenkunde*, Berlin 1937, 9. Bd., 5. Heft, S. 600-637, Abb. I-III. Schriftennachweis, S. 637.
[See also this *Bulletin*, 1936, No. 12, p. 288].

WORSLEY, R. R. LE G. The insecticidal properties of some East African plants. III. *Mundulea suberosa* Benth. Part 2, Chemical constituents. *The Annals of Applied Biology*, London, 1937, Vol. XXIV, No. 3, pp. 651-658. References, p. 658.

WORSLEY, R. R. LE G. The insecticidal properties of some East African plants. IV. *Mundulea suberosa*. Benth. Part 3, Variability of samples. *The Annals of Applied Biology*, London, 1937, Vol. XXIV, No. 3, pp. 659-664, fig. 1. References, p. 664.

ZANINI, Emilio. Polemichetta a salvaguardia della maiscoltura. *Giornale di Agricoltura della Domenica*, Roma, 1937, anno XLVII, n. 39, p. 328.
[Regarding the control of *Pyrausta nubilalis* and *Sesamia cretica*. — See the preceding article by the same author (this *Bulletin*, 1937, No. 10, p. 244) and the articles by E. Malenotti (this *Bulletin*, No. 11, p. 262)].

ZUBOV, M. Copper-organic preparations for controlling Plasmopara viticola on grapes. *Plant Protection*, Leningrad, 1937, Fasc. 12, pp. 174-176.
[In Russian, with title also in English].

NOTES

International Horticultural Congress. — The next International Horticultural Congress will take place at Berlin from 12 to 17 August, 1938.

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